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Bell Curves

Phone Giants Discover The Interactive Path Is Full of Obstacles

Films on Demand? For Now, What Most Will Offer Is Old-Fashioned Cable TV

Headaches of the Hardware

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DOVER TOWNSHIP, N.J.—When engineers sent a test call over Bell Atlantic Corp.'s new video network here a while back, the picture came through beautifully. So did the sound.

Just one tiny problem: They didn't arrive at the same time. "It looked like a badly dubbed foreign movie," recalls Lawrence Babbio, Bell Atlantic's vice chairman. Last month, engineers finally fixed the glitch. "It's almost perfect," Mr. Babbio says hopefully.

The Baby Bells' video networks were supposed to be spewing out interactive fare to a few million homes by now, but they are barely off the drawing board. Hampered by technical snags, soaring costs and regulatory hurdles, the Baby Bells and the cable-television giants as well are nowhere near making good on their much-hyped promises to build interactive networks across their regions.

Holding Back

Now, many of these telecommunications titans are in retreat. The market trials once hailed as the start of a commercial launch have been scaled back, and some Bells say they aren't sure they will build the systems at all. Two Baby Bells have scrapped applications to the Federal Communications Commission to erect interactive networks, derailing almost two years of agency review. A third Bell won approval — then quietly ditched its plans. All the Bells are more interested in delivering unadorned cable-TV service for the next few years, then waiting to see whether consumers will demand more.

And so interactive fare from the Bells that combines video and telecommunications seems unlikely to reach even one-quarter of U.S. households until well after the year 2000. Just aiming for the 25% mark in the next seven years "would be very optimistic," says Walter Rickard, chairman of Nynex Corp.'s multimedia group.

How could the Bells have been so wrong? The main reason is they vastly underestimated the difficulty of the undertaking. In light of that, their ardor to offer interactive services has cooled. So has the enthusiasm of their cable rivals.

The Bells had feared that a cable-industry move into two-way networks — providing home shopping, movies on demand, games and even phone calls — could threaten their monopoly on local telephone service. Cable companies likewise had fretted that the phone giants could use interactive networks to offer beefed-up local cable service.

'Back to Basics'

But it may well be awhile before either side makes good on those grandiose promises, resulting in a fading sense of urgency. "Everybody's getting back to basics," says Peter Price, president of Liberty Cable Television Inc. in New York.

Sweeping deregulation of the telecommunications business, which could be approved by Congress this year, may further detour the much-hyped highway. The Bells would have to focus on defending their hold on local phone service, which still provides 90% of their profits. They also would gear up to enter the long-distance market — a business they already know and a much safer bet than interactive networks.

The Bells have been proclaiming bold, specific rollout plans for interactive services for almost two years. Bell Atlantic had vowed to link up 1.2 million homes by the end of this year. So far, it doesn't have a single commercial customer. U S West Inc., the Denver-based Bell, had plans to wire 500,000 homes by year's end but has only 135 homes in a trial, and none get interactive fare. Pacific Telesis Group is running a year or more behind schedule in California. Ameritech Corp. of Chicago is also lagging, slashing its one-million-home target for 1995 to 200,000 and aiming to deliver only regular cable service at first.

Ambitious Plans

Cable operators have reneged on their grand schemes, too. For example, Time Warner Inc.'s much-ballyhooed test of interactive services in Orlando, Fla., serves only about 30 homes, far short of the 4,000 it had planned. Time Warner says it will wire all 4,000 by Christmas.

But the Baby Bells had the most ambitious plans, and their sophisticated networks gave them the infrastructure and expertise to lead the way to the so-called Interactive Age. All seven Bells say they will offer interactive video services in the future. The question is when.

The biggest obstacle is cost. "It's like going to the moon," technically possible but economically infeasible, says Mary Modahl of Forrester Research Inc. She says it now would cost nearly double the \$1,000 per home that most Bells hope to spend to wire up interactive fare.

One of the costliest, most time-consuming tasks is also one of the most basic: installing new phone lines that can handle video. More than 90% of the Bells' 2.7 million miles of telephone lines is antiquated copper wiring that can't transmit large volumes of video signals.

Fiber-optic lines can easily do it, but they are expensive to install and require

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costly gear to zap laser bits around at the speed of light. Rewiring all of the U.S. with such lines would cost well over \$120 billion—plus the cost of billing systems, computers, boxes atop TV sets and the like.

The cost crunch and logistical hassles play out on the manicured suburban streets here in Dover, where Bell Atlantic has been stringing fiber lines to neighborhoods. The pattern: "Learn and fix it, learn and fix it, learn and fix it," says John Seazholtz, chief technology officer.

Slow Going

On a recent day, crews for Earthworm Inc., a local drilling company, were scattered on a side street, working from utility blueprints and marking where water and gas lines run. They bored narrow tunnels, attaching fiber-optic cables to special drill bits to pull them back through the underground passage.

For all the sweat and effort, a good crew can lay just 500 feet of cable a day. So far, Bell Atlantic crews have laid or strung about 900,000 feet of cable in Dover, with more than a million feet to go. It took almost two years to wire the first 8,000 homes here, and it will take another two years to hook up the remaining 30,000 homes planned for the network.

"It is labor-intensive," said Tom Woodley, Bell Atlantic's project manager in Dover, surveying the scene before him. "But there's just no other way to do it."

Bell Atlantic plans to turn on service in Dover later this summer. Even then, it will deliver only garden-variety cable service without interactive capabilities. Those features won't come till late next year.

Overpromising by AT&T Corp. and General Instrument Corp. have contributed to the delays at Bell Atlantic. AT&T was to provide a "video manager," which controls the look and delivery of video services, while General Instrument would make the digital boxes atop TV sets. But both companies waffled on what they could deliver and when, forcing Bell Atlantic to keep pushing back its plans. Backsliding at Bell Atlantic over equipment designs and order volumes didn't help.

Rocket Science

"None of us realized the complexity" of building interactive networks, says Mr. Seazholtz of Bell Atlantic. Both AT&T and General Instrument admit to the delays in delivering equipment but say there were valid reasons. "We all wish it was easier to do, but it is rocket science at this point," a General Instrument spokeswoman says.

Bell Atlantic has set aside its applications to the FCC to build interactive networks in six other markets, though it says it intends to resubmit them later. It also has invested in a "wireless cable" company that will help it offer regular TV service in some markets next year.

U S West has run into similar snags. Now 18 months behind schedule, it has dropped its network applications at the FCC to spend another year exploring financial, technical and regulatory issues before

deciding whether to push ahead.

The company's much-watched test in Omaha, Neb., now reaches only 135 homes, although the company has laid enough fiber-optic lines to eventually link up 50,000 households. But initially U S West plans to offer only old-style cable service.

Its executives say it isn't that they are technically incapable of offering interactivity — it just isn't in the business plan yet. "We didn't want to get there that fast," says Lynn Streeter, a research director in the Bell's advanced-technology group.

In the New York area, Nynex unveiled plans early last year to sell interactive fare to two million homes by the end of 1996. Now, it has scaled back to at most 390,000 homes in two markets and may run late. For the rest of the region, Nynex plans to deliver only regular TV service, via wireless cable, for now.

At Pacific Telesis, Vice President Tim Harden says new-technology vendors, anxious to land a sale, make grand claims, only to have their equipment fail in the lab. "And these are hand-built prototypes," he says. "You begin to wonder if the technology works at that point."

In late 1993, Pacific Telesis said it would offer multimedia services to more than 1.5 million homes by the end of 1996. It hasn't made much progress. In trying to deliver 21st-century technology, it must contend with thousands of low-tech snags. The Baby Bell has a checklist of 30,000 "milestones" it must pass by late next year to remain on schedule; so far, only about 25% of them have been met. "In a massive project like this, a fair amount of things can go wrong," Mr. Harden says.

Pacific Telesis crews have been busy laying upgraded phone lines for over a year. But they have yet to install any video gear because the Bell lacked federal approval. The company, which first requested FCC approval in December 1993, got the green light only last week.

But an FCC approval doesn't guarantee that an interactive system will be built. Ameritech made plans in early 1994 to deliver a "virtually unlimited variety of programming" to customers across the Midwest and received blanket approval from the FCC last December.

Customers are still waiting. The Chicago Bell has reversed course and decided to build plain old cable systems. It is planning a new 80-channel cable system in Plymouth, Mich., among other places, and broke ground only earlier this month.

Ameritech's executives say the company isn't making a U-turn on the vaunted highway. Greg Brown, president of its new-media group, says the performance of the systems it is building "will be unchanged from what we had planned." Yet a spokesman admits that the systems won't initially offer instant on-demand programs, video-based interactive health-care and "distance learning" — the kind of services touted in press releases last year.

Other Baby Bells have announced less

grandiose plans but are faring no better at fulfilling them. SBC Communications Inc., the Southwestern Bell based in San Antonio, plans a network in Richardson, Texas, that it hopes will eventually reach 47,000 homes. So far, it hasn't broken ground but plans to wire 1,500 homes by year end.

BellSouth Corp. of Atlanta, the most circumspect on information-highway hoopla from the start, plans a small trial in Chamblee, Ga., and recently started construction. It has asked FCC permission to build a small cable system on Daniel Island, S.C., serving 7,000 homes.

Despite the setbacks, says Tom Bystrycki, an executive vice president at U S West, "We still believe the full-service networks will be built. But what we've learned is that these builds take time."